PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ECHOSTAR TECHNOLOGIES L.L.C.	02/14/2017

RECEIVING PARTY DATA

Name:	ECHOSTAR TECHNOLOGIES INTERNATIONAL CORPORATION
Street Address:	100 INVERNESS TERRACE EAST
City:	ENGLEWOOD
State/Country:	COLORADO
Postal Code:	80112

PROPERTY NUMBERS Total: 68

Property Type	Number
Patent Number:	9557043
Patent Number:	9088343
Patent Number:	9253317
Patent Number:	9438727
Patent Number:	9247409
Patent Number:	9396624
Patent Number:	9495860
Patent Number:	9576464
Patent Number:	D778191
Patent Number:	D778190
Application Number:	15379322
Application Number:	14798701
Application Number:	14567754
Application Number:	14567765
Application Number:	14567770
Application Number:	14567783
Application Number:	14188365
Application Number:	14138205
Application Number:	15184522
Application Number:	15414290

PATENT REEL: 041735 FRAME: 0861

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Property Type	Number
Application Number:	14459517
Application Number:	14475252
Application Number:	14485188
Application Number:	14485038
Application Number:	14553763
Application Number:	14567502
Application Number:	14566353
Application Number:	14577717
Application Number:	14981501
Application Number:	14566977
Application Number:	14565853
Application Number:	14584075
Application Number:	14671299
Application Number:	14837591
Application Number:	14844862
Application Number:	14709791
Application Number:	14832821
Application Number:	14844939
Application Number:	14988037
Application Number:	14710331
Application Number:	14738157
Application Number:	14986483
Application Number:	15075412
Application Number:	15050958
Application Number:	14952580
Application Number:	14970235
Application Number:	14974152
Application Number:	14952479
Application Number:	14985151
Application Number:	14986496
Application Number:	29550320
Application Number:	29550327
Application Number:	29550326
Application Number:	29550321
Application Number:	15228672
Application Number:	62350344
Application Number:	15201114
Application Number:	15204393

PATENT REEL: 041735 FRAME: 0862

Property Type	Number
Application Number:	62347687
Application Number:	15189775
Application Number:	15230155
Application Number:	15246259
Application Number:	15246079
Application Number:	15280804
Application Number:	15395204
Application Number:	15332617
Application Number:	62441303
Application Number:	15393740

CORRESPONDENCE DATA

Fax Number:

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

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Address Line 1: 100 INVERNESS TERRACE EAST Address Line 4: ENGLEWOOD, COLORADO 80112

NAME OF SUBMITTER:	MAX S GRATTON
SIGNATURE:	/Max S Gratton/
DATE SIGNED:	02/16/2017

Total Attachments: 12

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PATENT REEL: 041735 FRAME: 0863

PATENT ASSIGNMENT

WHEREAS, EchoStar Technologies L.L.C., a limited liability company organized and existing under the laws of the State of Texas, United States of America and having a principal place of business of 100 Inverness Terrace East, Englewood, Colorado 80112 ("ASSIGNOR"), owns rights in, to and under the patent applications set forth in the attached Schedule A (the "Properties"); and

WHEREAS, EchoStar Technologies International Corporation, a corporation organized and existing under the laws of the State of Colorado, United States of America and having a principal place of business of 100 Inverness Terrace East, Englewood, Colorado 80112 ("ASSIGNEE"), is desirous of acquiring ASSIGNOR'S entire right, title and interest in, to and under the Properties.

WHEREAS, ASSIGNOR, to the extent they own any right, title and interest in and to the Properties is desirous of assigning any and all such rights, title and/or interest to ASSIGNEE.

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the ASSIGNOR has sold, assigned, transferred and set over, and by these presents does hereby sell, assign, transfer and set over, unto the ASSIGNEE, its successors, legal representatives and assigns, the entire right, title and interest in, to and under the Properties and any and all letters patent or patents in the United States of America and all foreign countries which may be granted therefore and thereon (including any divisions, continuations, continuations-in-part, reissues, reexaminations or extensions of letters patents and other related applications arising from, corresponding to and/or claiming priority to any of the Properties) and the registration thereof, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by the ASSIGNEE for its own use and enjoyment and for the use and enjoyment of its successors, legal representatives and assigns, to the full end of the term or terms for which letters patent may be granted, as fully and entirely as the same would have been held and enjoyed by the ASSIGNOR had this assignment not been made, and further including all income, royalties, damages and payments for past or future infringements and misappropriation's thereof, all rights to sue for past, present and future infringements or misappropriations thereof, and all rights corresponding to any of the above throughout the world and for the full term or terms of assigned Properties;

AND for the same consideration, ASSIGNOR hereby covenants and agrees to and with ASSIGNEE, its successors, legal representatives and assigns, that ASSIGNOR will encourage its employees named as inventors on one or more of the assigned Properties, to make, execute and deliver any and all other instruments in writing as may be necessary to assign the Properties to ASSIGNEE, including, but not limited to, any and all further application papers, atfidavits, assignments and other documents, and that ASSIGNOR will communicate to ASSIGNEE, its successors, legal representatives and assigns, all facts known to ASSIGNOR relating to the Properties, and that ASSIGNOR will testify in all legal proceedings and generally do all things which may be necessary or desirable to more effectually secure to and vest in ASSIGNEE, its successors, legal representatives and

assigns, the entire right, title and interest in and to the Properties;

AND THE ASSIGNOR HEREBY authorizes and requests the Commissioner of the United States Patent and Trademark Office, and any official of any country or countries foreign to the United States, whose duty is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument

IN WITNESS WHEREOF, the undersigned have executed this Patent Assignment as of the date of the 14th date of February, 2017

Assignee:	EchoStar Technologies L.L.C.
	Dean A. Manson
The foregoin Manson, Exe	May and way May gernally g instrument was acknowledged before me this <u>I Y</u> day of <u>Jebruary</u> 2017 by Dean A. cutive Vice President, General Counsel & Secretary of EchoStar Technologyes L.L.C., a Texas ty company, on behalf of the company.
My Commiss Notary Public	* ************************************

Assignee:	EchoStar Technologies Interna	itional Corporation	
	Max S. Gratton		
State of Colo	rado		
County of Ara	apahoe		
The foregoing	; instrument was acknowledged bel	fore me this <u>///</u> day of <u></u>	to
Senior_Pater	s instrument was acknowledged bef at Counsel & Director of EchoSt on behalf of the corporation.	fore me this <u>//</u> day of <u>////////</u> /2017 by Max S. Gra ar Technologies International Corporation, a Colo	itoi rad
Senior_Pater	t Counsel & Director of EchoSt	fore me this <u>//</u> day of <u>Fb///d</u> /2017 by Max S. Gra ar Technologies International Corporation, a Colo BITA M BARTOLO	rtoi rad
Senior_Pater	t Counsel & Director of EchoSt	ar Technologies International Corporation, a Colo	rtoi rad
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Senior_Pater corporation,	at Counsel & Director of EchoSt on behalf of the corporation.	ar Technologies International Corporation, a Colo RITA M BARTOLO	rad

<u>Schedule A</u>

Issued Patents

COUNTRY	TITLE	APPLICATION NUMBER	DATE FILED	PATENT NUMBER
US	Easy-install Home Automation Light Switch	14028426	Sep 16, 2013	9557043
US	MULTI PERSONAL AREA NETWORK (PAN) RADIO WITH SHARED TRANSMITTER	14045378	Oct 3, 2013	9088343
US	SYSTEM AND METHOD TO TRACK AND LOG MOBILE COMMUNICATION DEVICE CALL STATUS WHEN THE DEVICE IS NOT IN POSSESSION	14017106	Sep 3, 2013	9253317
US	SYSTEM AND METHOD TO TRACK AND LOG MOBILE COMMUNICATION DEVICE CALL STATUS WHEN THE DEVICE IS NOT IN POSSESSION	14974857	Dec 18, 2015	9438727
US	HOME AUTOMATION COMMUNICATIONS	14100543	Dec 9, 2013	9247409
US	SYSTEMS AND METHODS FOR HOME AUTOMATION INTEGRATION WITH A DOORBELL	14480280	Sep 8, 2014	9396624
US	FALSE ALARM IDENTIFICATION	14567348	Dec 11, 2014	9495860

US	METHODS AND SYSTEMS FOR PROVIDING ALERTS IN RESPONSE TO ENVIRONMENTAL SOUNDS	14526125	Oct 28, 2014	9576464
US	Buzzer	29550328	Dec 31, 2015	D778191
US	Security Adaptor	29550325	Dec 31, 2015	D778190
US	Easy-install Home Automation Light Switch	14028426	Sep 16, 2013	9557043

Patent Applications

COUNTRY	TITLE	APPLICATION NUMBER	DATE FILED
US	Easy-install Home Automation Light Switch	15379322	Dec 14, 2016
BR	Easy-install Home Automation Light Switch	BR1120160056884	Sep 8, 2014
CA	Easy-install Home Automation Light Switch	2924498	Sep 8, 2014
CN	Easy-install Home Automation Light Switch	2014800545251	Sep 8, 2014
EP	Easy-install Home Automation Light Switch	147672612	Sep 8, 2014
JP	Easy-install Home Automation Light Switch	2016542032	Sep 8, 2014

MX	Easy-install Home Automation Light Switch	MXa2016003342	Sep 8, 2014
US	MULTI NETWORK RADIO WITH SHARED TRANSMITTER	14798701	Jul 1, 2015
US	Home Monitoring and Control	14567754	Dec 11, 2014
US	Home Monitoring and Control	14567765	Dec 11, 2014
US	Home Monitoring and Control	14567770	Dec 11, 2014
US	Home Monitoring and Control	14567783	Dec 11, 2014
US	EMERGENCY RESPONDER SYSTEMS AND METHODS	14188365	Feb 24, 2014
US	ACCESSING DEVICES VIA AN ELECTRONIC PROGRAM GUIDE	14138205	Dec 23, 2013
US	SYSTEMS AND METHODS FOR HOME AUTOMATION INTEGRATION WITH A DOORBELL	15184522	Jun 16, 2016
US	SYSTEMS AND METHODS FOR HOME AUTOMATION INTEGRATION WITH A DOORBELL	15414290	Jan 24, 2017
US	PERSONALIZED AMBIENT TEMPERATURE MANAGEMENT	14459517	Aug 14, 2014
wo	PERSONALIZED AMBIENT TEMPERATURE MANAGEMENT	PCTEP2015067386	Jul 29, 2015
US	MAINTAINING UP-TO-DATE HOME AUTOMATION MODELS	14475252	Sep 2, 2014

8R	MAINTAINING UP-TO-DATE HOME AUTOMATION MODELS	BR1120160103769	Sep 3, 2014
CA	MAINTAINING UP-TO-DATE HOME AUTOMATION MODELS	2930990	Sep 3, 2014
ξP	MAINTAINING UP-TO-DATE HOME AUTOMATION MODELS	148705072	Sep 3, 2014
MX	MAINTAINING UP-TO-DATE HOME AUTOMATION MODELS	MXa2016006239	
US	HOME AUTOMATION SYSTEM INTEGRATION	14485188	Sep 12, 2014
US	DETECTION AND MITIGATION OF WATER LEAKS WITH HOME AUTOMATION	14485038	Sep 12, 2014
ВЯ	DETECTION AND MITIGATION OF WATER LEAKS WITH HOME AUTOMATION	BR1120160112032	Sep 12, 2014
CA	DETECTION AND MITIGATION OF WATER LEAKS WITH HOME AUTOMATION	2931007	Sep 12, 2014
CN	DETECTION AND MITIGATION OF WATER LEAKS WITH HOME AUTOMATION	2014800670035	Sep 12, 2014
EP	DETECTION AND MITIGATION OF WATER LEAKS WITH HOME AUTOMATION	148689284	Sep 12, 2014
MX	DETECTION AND MITIGATION OF WATER LEAKS WITH HOME	MXa2016006589	

	AUTOMATION		
US	Integrated Door Locking and State Detection Systems and Methods	14553763	Nov 25, 2014
US	Multi-Tiered Feedback- Controlled Home Automation Notifications	14567502	Dec 11, 2014
US	DYNAMIC MONITORING AND DIAGNOSIS OF WIRELESS NETWORK CONFIGURATION	14566353	Dec 10, 2014
US	Automatic Event Based Video Selection for Home Automation System	14577717	Dec 19, 2014
US	Home Automation Automatic Vacation Mode	14981501	Dec 28, 2015
US	VOICE-RECOGNITION HOME AUTOMATION SYSTEM FOR SPEAKER-DEPENDENT COMMANDS	14566977	Dec 11, 2014
US	HOME AUTOMATION BUBBLE ARCHITECTURE	14565853	Dec 10, 2014
WO	METHODS AND SYSTEMS FOR PROVIDING ALERTS IN RESPONSE TO ENVIRONMENTAL SOUNDS	PCTEP15073008	Oct 6, 2015
US	Alert Suspend for remainder of Event	14584075	Dec 29, 2014
US	Home automation - Trigger by sound	14671299	Mar 27, 2015
US	DEVICE-BASED EVENT DETECTION AND NOTIFICATION SURFACING	14837591	Aug 27, 2015
US	METHODS AND SYSTEMS FOR COORDINATING HOME AUTOMATION ACTIVITY	14844862	Sep 3, 2015
US	Home Automation Weather Detection	14709791	May 12, 2015

US	Cloning lights behaviors from primary to secondary residence	14832821	Aug 21, 2015
US	METHODS AND SYSTEMS FOR COORDINATING HOME AUTOMATION ACTIVITY	14844939	Sep 3, 2015
US	FLAT ETHERNET CABLES AND ASSOCIATED SYSTEMS, DEVICES, AND METHODS	14988037	Jan 5, 2016
US	UNMANNED AERIAL VEHICLE INTEGRATION WITH HOME AUTOMATION SYSTEMS	14982366	Dec 29, 2015
wo	UNMANNED AERIAL VEHICLE INTEGRATION WITH HOME AUTOMATION SYSTEMS	PCTUS1657729	Oct 19, 2016
US	RESTRICTED ACCESS FOR HOME AUTOMATION SYSTEM	14710331	May 12, 2015
wo	RESTRICTED ACCESS FOR HOME AUTOMATION SYSTEM	PCTUS1628126	Apr 18, 2016
US	HOME AUTOMATION COMMUNICATIONS	14738157	Jun 12, 2015
US	METHODS AND SYSTEMS FOR CONTROL OF HOME AUTOMATION ACTIVITY BASED ON USER PREFERENCES	14986483	Dec 31, 2015
US	METHODS AND SYSTEMS TO MAKE CHANGES IN HOME AUTOMATION BASED ON USER STATES	15075412	Mar 21, 2016
US	TELEVISION RECEIVER AND HOME AUTOMATION SYSTEM AND METHODS TO ASSOCIATE DATA WITH NEARBY PEOPLE	15050958	Feb 23, 2016
US	HVAC Health Monitoring Systems and Methods	14952580	Nov 25, 2015
US	Home Automation Data Storage System and Methods	14970235	Dec 15, 2015

US	Integrated CO detector and Thermostat	14974152	Dec 18, 2015
US	NETWORK INTRUSION MITIGATION	14952479	Nov 25, 2015
US	PERSONALIZED HOME AUTOMATION CONTROL BASED ON INDIVIDUALIZED PROFILING	14985151	Dec 30, 2015
US	METHODS AND SYSTEMS FOR CONTROL OF HOME AUTOMATION ACTIVITY BASED ON USER CHARACTERISTICS	14986496	Dec 31, 2015
US	Single Light Switch	29550320	Dec 31, 2015
US	Flub	29550327	Dec 31, 2015
US	Proximity Sensor	29550326	Dec 31, 2015
US	Triple Light Switch	29550321	Dec 31, 2015
US	Midair Tethering of an Unmanned Aerial Vehicle with a Docking Station	15228672	Aug 4, 2016
US	Multi-Modal Video Camera Systems and Methods	62350344	Jun 15, 2016
US	Outdoor Messaging Display For Home Automation/Security Systems	15201114	Jul 1, 2016
US	HAPTIC FEEDBACK AS ACCESSIBILITY MODE IN HOME AUTOMATION SYSTEMS	15204393	Jul 7, 2016

US	REMOTE SOUND GENERATION FOR A HOME AUTOMATION SYSTEM	62347687	Jun 9, 2016
US	REMOTE SOUND GENERATION FOR A HOME AUTOMATION SYSTEM	15189775	Jun 22, 2016
US	AUTOMATED DETECTION OF WASHER/DRYER OPERATION/FAULT CONDITION	15230155	Aug 5, 2016
US	SYSTEMS AND METHODS FOR SUPPRESSING UNWANTED HOME AUTOMATION NOTIFICATIONS	15246259	Aug 24, 2016
US	TRUSTED USER IDENTIFICATION AND MANAGEMENT FOR HOME AUTOMATION SYSTEMS	15246079	Aug 24, 2016
US	SYSTEMS AND METHODS FOR FINDING WIRELESS SIGNALS SUFFICIENT FOR INSTALLATION OF WIRELESS HOME AUTOMATION DEVICES	15280804	Sep 29, 2016
US	SMART WORKPLACE MOVEMENT	15395204	Dec 30, 2016
US	Smart elevator movement	15332617	Oct 24, 2016
US	SECURITY VIDEO CAMERA INSERTABLE INTO AN EXTERIOR LIGHT SOCKET FOR ELECTRICAL POWER AND ASSOCIATED SYSTEMS, DEVICES, AND METHODS	62441303	Dec 31, 2016
US	Systems and Methods for Delivering Text-based Messaging via Home Automation Devices	15393740	Dec 29, 2016

US ·	Systems and Methods for UAV Docking and Recharging	To be filed	TBD
US	Smart Light Bulb Awareness and Automatic Notification of Replacements	To be filed	TBD